

WHAT IS CLAIMED IS:

1. In a fan-coupling device wherein the inside of a sealing housing composed of a case of a non-magnetic material and a cover mounted on said case and borne through a bearing on a rotary shaft member having a drive disc fixed on its leading end is divided by a partition into an oil sump and a torque transmission chamber housing said drive disc, wherein a valve member having a magnetism for opening/closing a dam or a valve member provided with armature having a magnetism formed in such a portion, in which the oil accumulates at a rotating time, of the inner circumference wall face of a cover confronting the outer circumference wall portion of the drive disc and an oil circulation passage formed to lead to said dam between the torque transmission chamber and the oil sump is provided in the oil sump, and wherein an electromagnet is supported on said rotary shaft member through a bearing or bracket on the side of the oil sump of said sealed housing, whereby said valve member is activated by said electromagnet to open/close and control the oil circulation passage so that the effective contact area of oil at a torque transmission clearance portion between a drive side and a driven side may be increased/decreased to control the torque transmission from the drive side to the driven side,

an external control type fan-coupling device, wherein

a magnetic member of either an integral structure or a split structure composed of a plurality of parts and assembled integrally is arranged between said electromagnet and said valve member and is so assembled in the sealed housing that the magnetic flux of the electromagnet may be transmitted to the valve member through said magnetic member.

2. The external control type fan-coupling device according to Claim 1, wherein said magnetic member of the integral structure is constructed to have a plurality of arcuate holes in one plate member and is sealed by filling said arcuate holes with a sealant.

3. The external control type fan-coupling device according to Claim 2, wherein said sealant is a rubbery sealant.

4. The external control type fan-coupling device according to Claim 2, wherein said sealant filling said ring-shaped space protrudes from at least one of said inner ring and said outer ring.

5. The external control type fan-coupling device according to Claim 1, wherein said magnetic member of the split structure is formed into a ring shape.

6. The external control type fan-coupling device according to Claim 5, wherein said ring-shaped magnetic member of the split structure is constructed to include an inner ring and an outer ring and to have a ring-shaped space between said inner ring and said outer ring, and wherein the inner ring and the outer ring are jointed by a non-magnetic material ring fitted and fixed between the inner ring and the outer ring.

7. The external control type fan-coupling device according to Claim 5, wherein said ring-shaped magnetic member of the split structure is constructed to include an inner ring and an outer ring and to have a ring-shaped space between said inner ring and said outer ring, wherein the inner ring and the outer ring are fitted and fixed with a non-magnetic material ring, and wherein said non-magnetic material ring and said outer ring are jointed by brazing them.

8. The external control type fan-coupling device according to Claim 5, wherein said ring-shaped magnetic member of the split structure is constructed to include an inner ring and an outer ring and to have a ring-shaped space between said inner ring and said outer ring, wherein the inner ring and the outer ring are fitted and fixed with a non-magnetic material ring, and wherein said ring-shaped space is sealed by filling it with a sealant.

9. The external control type fan-coupling device according to Claim 8, wherein said sealant is a rubbery sealant.

10. The external control type fan-coupling device according to Claim 8, wherein said sealant filling said ring-shaped space protrudes from at least one of said inner ring and said outer ring.

11. The external control type fan-coupling device according to Claim 5, wherein said ring-shaped magnetic member of the split structure is constructed to include an inner ring and an outer ring and to have a ring-shaped space between said inner ring and said outer ring, wherein said inner ring and said outer ring are jointed with a non-magnetic material disposed at a plurality of portions in said ring-shaped space, and wherein the ring-shaped space at the portions other than the portions jointed with said non-magnetic material is sealed by filling the portions with a sealant.

12. The external control type fan-coupling device according to Claim 11, wherein said sealant is a rubbery sealant.

13. The external control type fan-coupling device according to Claim 11, wherein said sealant filling said ring-shaped space

protrudes from at least one of said inner ring and said outer ring.

14. The external control type fan-coupling device according to Claim 12, wherein the rubbery sealant filling said ring-shaped space is baked and molded on said inner ring and said outer ring.

15. The external control type fan-coupling device according to Claim 14, wherein the sealing filling said ring-shaped space protrudes from at least one of said inner ring and said outer ring toward the valve member.

16. The external control type fan-coupling device according to Claim 1, wherein said valve member is made of a leaf spring material of steel and has an armature.

17. The external control type fan-coupling device according to Claim 1, wherein the armature of said valve member is arranged in the vicinity of the rotary shaft member.